

one end of which is rounded and engages with the notches in the index plate. Back of the pin and held in place by a headless set-screw *K* is a coil spring *J*, which holds the locking pin against the index plate. The tension of this spring is just enough to hold the work from turning while, being drilled, but not enough to prevent its being readily indexed by a quick pull on the indexing lever.

The work is held in position against the locating plate *A* by the plunger *L*, which rests on a single $\frac{1}{2}$ -inch hardened steel

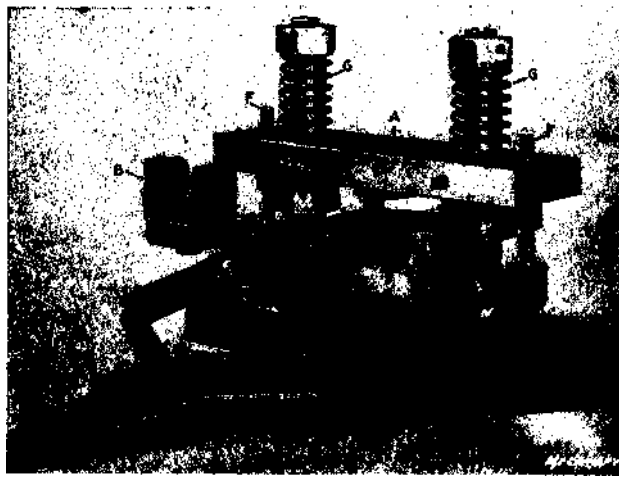


Fig. 6. Jig having Lever- and Spring-operated Clamping Members

ball that acts as a bearing while the work is being indexed. Plunger *L* is carried in a second plunger *M*, which is held up by a powerful coil spring *N*. This spring should be longer and stiffer than the one shown, as an enormous pressure can be obtained with drills as small as the No. 30 used with this work. The outer plunger *M* is operated by a foot-treadle connected to the lever *O*. In operation, the foot-treadle is depressed and a piece of work is placed between the plunger *L* and the locating plate *A*. When the treadle is released, the work is held by the tension of the spring *N* while the indexing is done by the lever *E*. The locating plate *A* has slots milled in it